FIG. 1

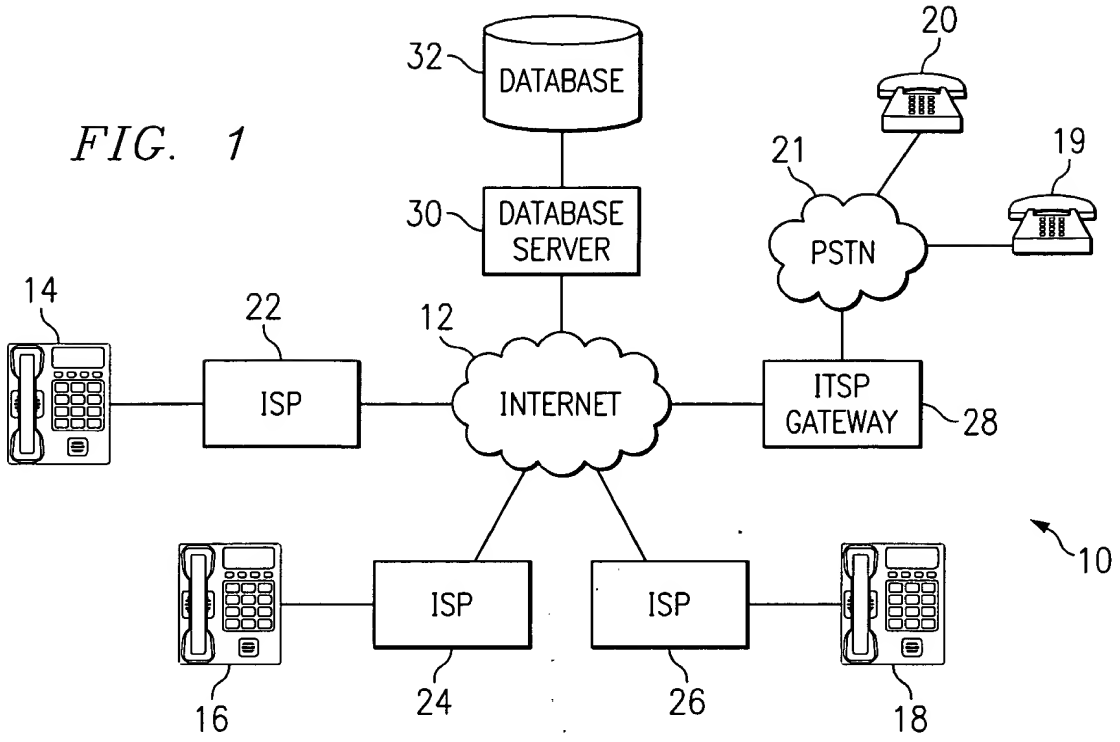

32
DATABASE
20
21
19
30
DATABASE SERVER
PSTN
14
22
12
ISP
INTERNET
ITSP GATEWAY
28
10
ISP
ISP
16
24
26
18

FIG. 2

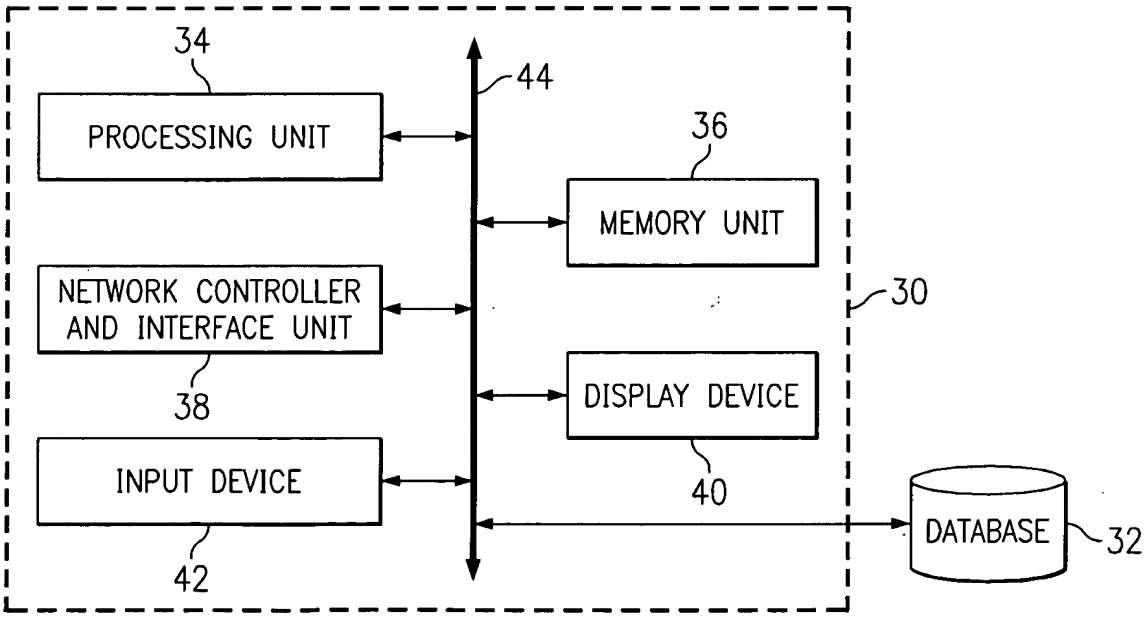

34
44
PROCESSING UNIT
36
MEMORY UNIT
NETWORK CONTROLLER AND INTERFACE UNIT
30
38
DISPLAY DEVICE
INPUT DEVICE
40
DATABASE
32
42

FIG. 3

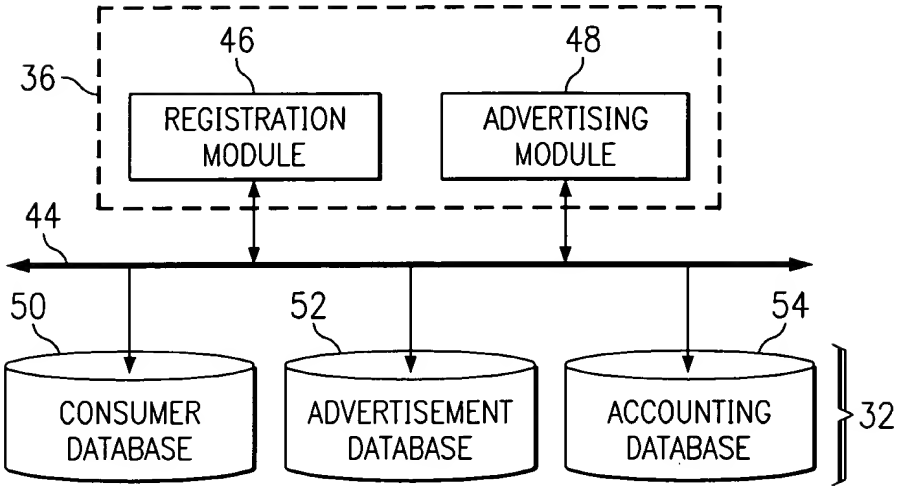

36
46
48
REGISTRATION MODULE
ADVERTISING MODULE
44
50
52
54
CONSUMER DATABASE
ADVERTISEMENT DATABASE
ACCOUNTING DATABASE
32

FIG. 5

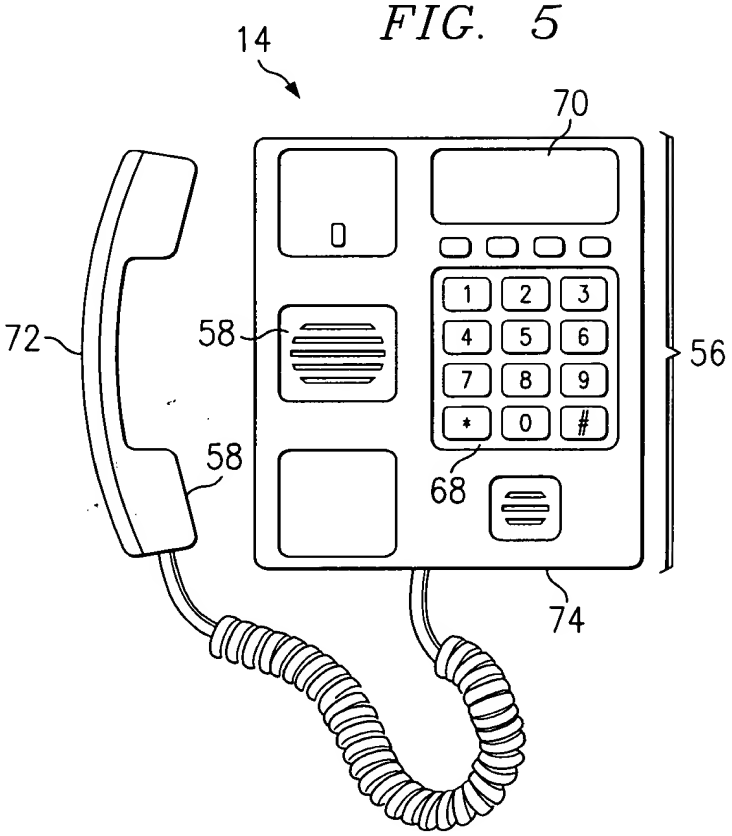

14
70
72
58
58
56
68
74
1
2
3
4
5
6
7
8
9
*
0
#

*FIG. 4*

50

| GENDER (1=MALE; 2=FEMALE) | AGE GROUP (1=0–11 YEARS; 2=12–20 YEARS; 3=21–35 YEARS; 4=36–50 YEARS; 5=50–65 YEARS; 6=OVER 65 YEARS) | ANNUAL INCOME (1=$0–$25,000; 2=$25,001–$40,000; 3=$40,001–$65,000; 4=$65,001–$85,000; 5=OVER $85,000) | HOBBY/INTEREST (1=STOCK MARKET; 2=SPORTS SCORES; 3=FASHION; 4=DINING OUT; 5=MUSIC) | CONSUMER PROFILE | CONSUMER CODE |
|---|---|---|---|---|---|
| 1 | 2 | 1 | 2 | 1212 | 0018783902 |
| 1 | 6 | 3 | 1 | 1631 | 0186532497 |
| 2 | 2 | 5 | 4 | 2253 | 2380001127 |
| 1 | 3 | 4 | 3 | 1344 | 0000488925 |
| ooo | ooo | ooo | ooo | ooo | ooo |
| 2 | 5 | 4 | 4 | 2541 | 1095600488 |
| ooo | ooo | ooo | ooo | ooo | ooo |

FIG. 6

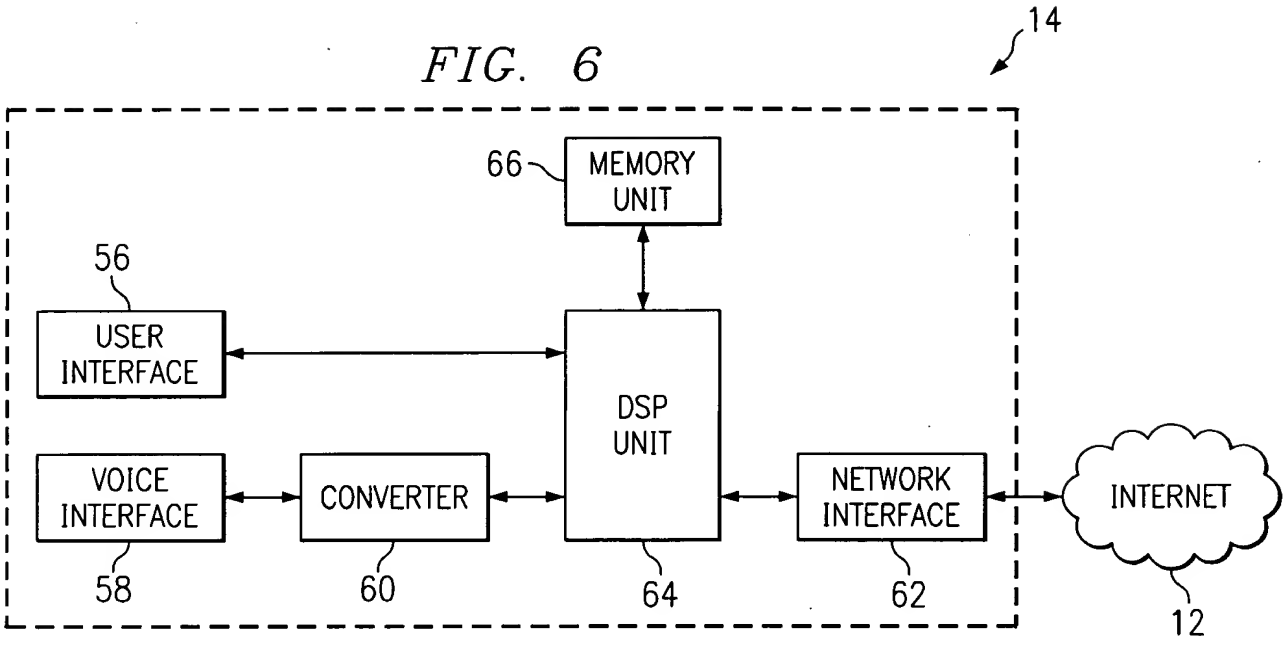
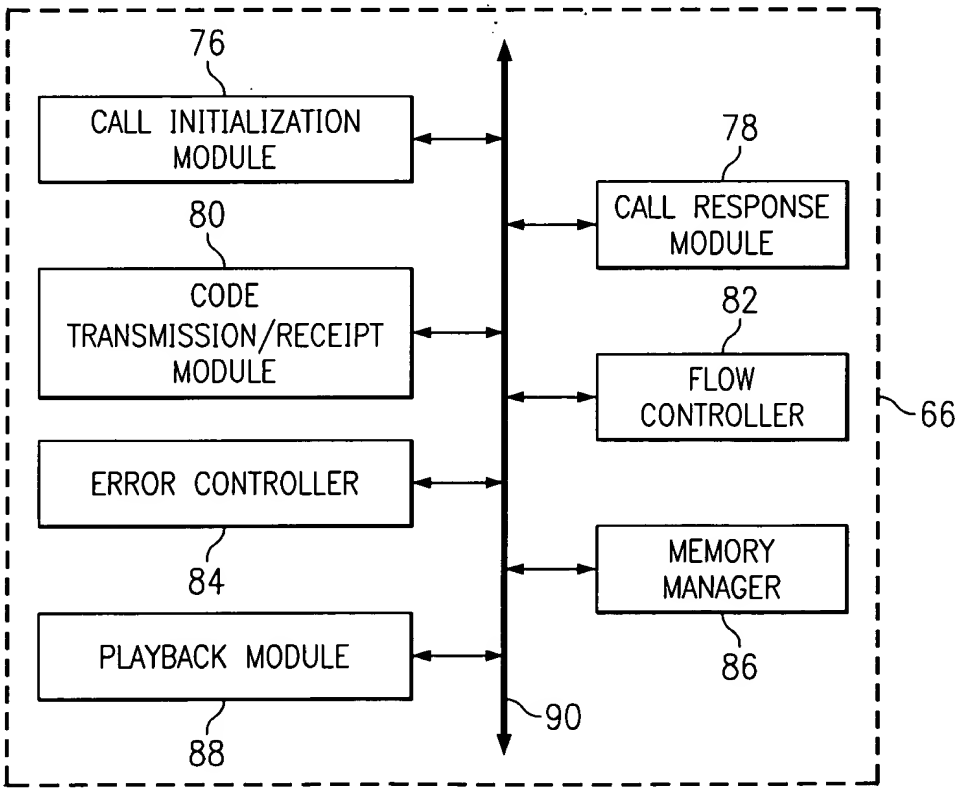

14
66
MEMORY UNIT
56
USER INTERFACE
DSP UNIT
VOICE INTERFACE
CONVERTER
NETWORK INTERFACE
INTERNET
58
60
64
62
12

FIG. 7


76
CALL INITIALIZATION MODULE
78
CALL RESPONSE MODULE
80
CODE TRANSMISSION/RECEIPT MODULE
82
FLOW CONTROLLER
66
ERROR CONTROLLER
84
MEMORY MANAGER
86
PLAYBACK MODULE
90
88

5/12

FIG. 8

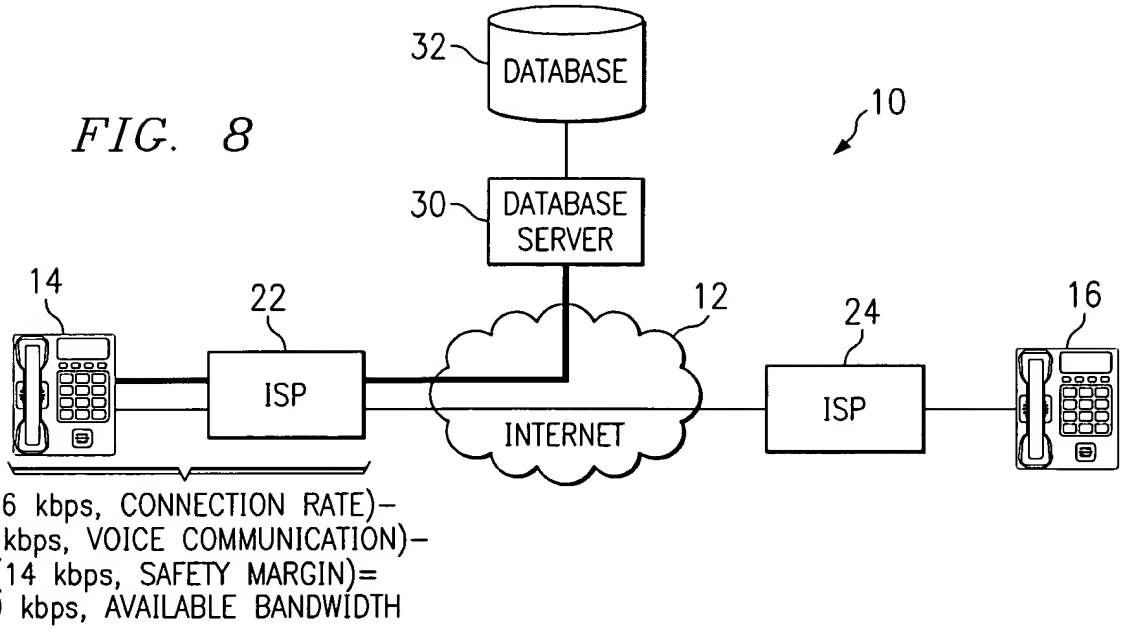



FIG. 9

86

| MEMORY LOCATION | AVAILABLE TO STORE NEW ADS? | ADVERTISEMENT | LAST PLAYED | PLAY AD FOR WHICH CONSUMER PROFILES? (*=WILDCARD, OR PLACEHOLDER) | NUMBER OF TIMES PLAYED | CONSUMER CODES |
|---|---|---|---|---|---|---|
| 1 | Y | 0884487753 | 8–04–00; 9:05:01am | 1 2 * * | 2 | 0018783902 1554896770 |
| 2 | N | 0001589643 | | 2 2 * 3 | 0 | |
| 3 | Y | 0000879041 | 8–05–00; 3:14:56p | 2 * * 4 | 3 | 2380001127 1095600488 0008749554 |
| 4 | Y | 1986247730 | 8–02–00; 3:14:16p | 2 * * 4 | 2 | 2380001127 0008749554 |
| 5 | N | 1001197834 | | 1 4 * 2 | 0 | |
| 6 | Y | 0532130784 | 8–11–00; 12:32:55p | * 2 * * | 1 | 0018783902 0186532497 |
| 7 | Y | | | | | |
| o o o | o o o | o o o | o o o | o o o | o o o | o o o |

FIG. 10

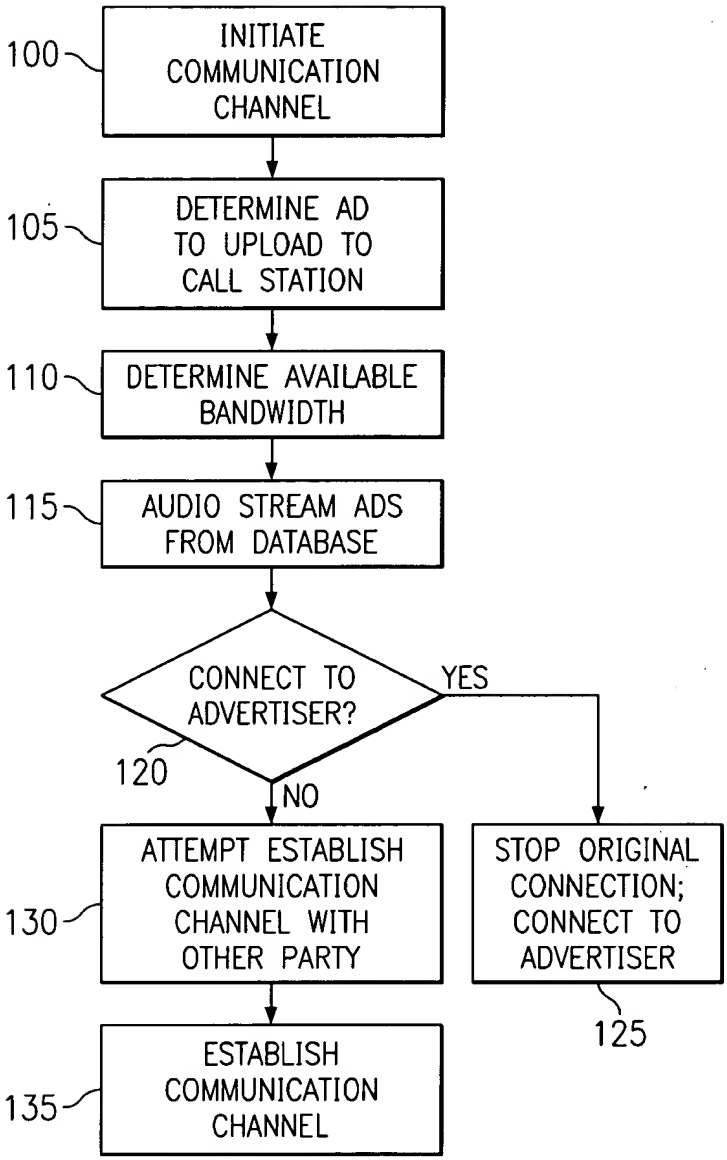

100
INITIATE COMMUNICATION CHANNEL
105
DETERMINE AD TO UPLOAD TO CALL STATION
110
DETERMINE AVAILABLE BANDWIDTH
115
AUDIO STREAM ADS FROM DATABASE
CONNECT TO ADVERTISER?
120
YES
NO
130
ATTEMPT ESTABLISH COMMUNICATION CHANNEL WITH OTHER PARTY
135
ESTABLISH COMMUNICATION CHANNEL
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
125

FIG. 13

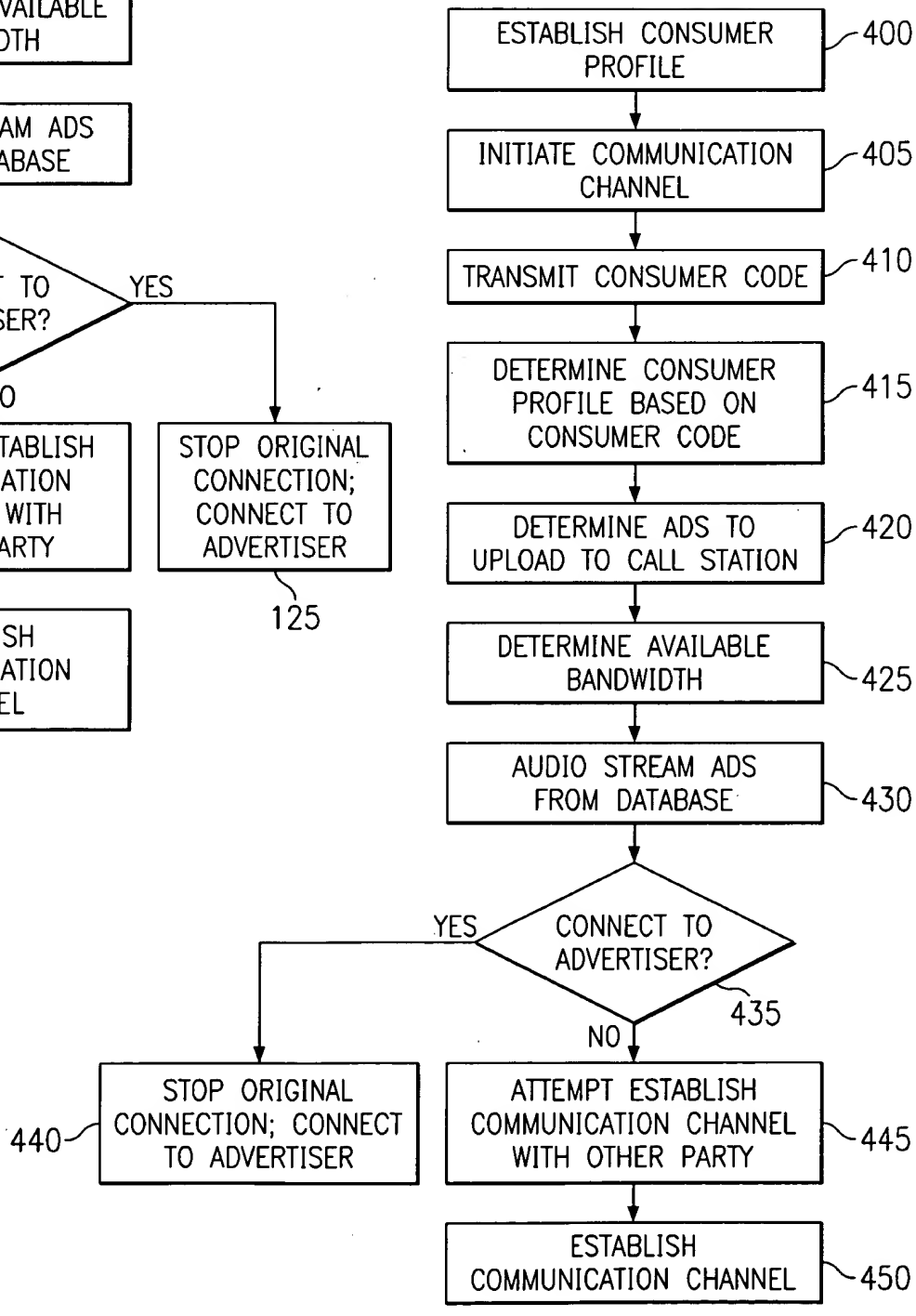

ESTABLISH CONSUMER PROFILE
400
INITIATE COMMUNICATION CHANNEL
405
TRANSMIT CONSUMER CODE
410
DETERMINE CONSUMER PROFILE BASED ON CONSUMER CODE
415
DETERMINE ADS TO UPLOAD TO CALL STATION
420
DETERMINE AVAILABLE BANDWIDTH
425
AUDIO STREAM ADS FROM DATABASE
430
CONNECT TO ADVERTISER?
435
YES
NO
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
440
ATTEMPT ESTABLISH COMMUNICATION CHANNEL WITH OTHER PARTY
445
ESTABLISH COMMUNICATION CHANNEL
450

FIG. 11 7/12

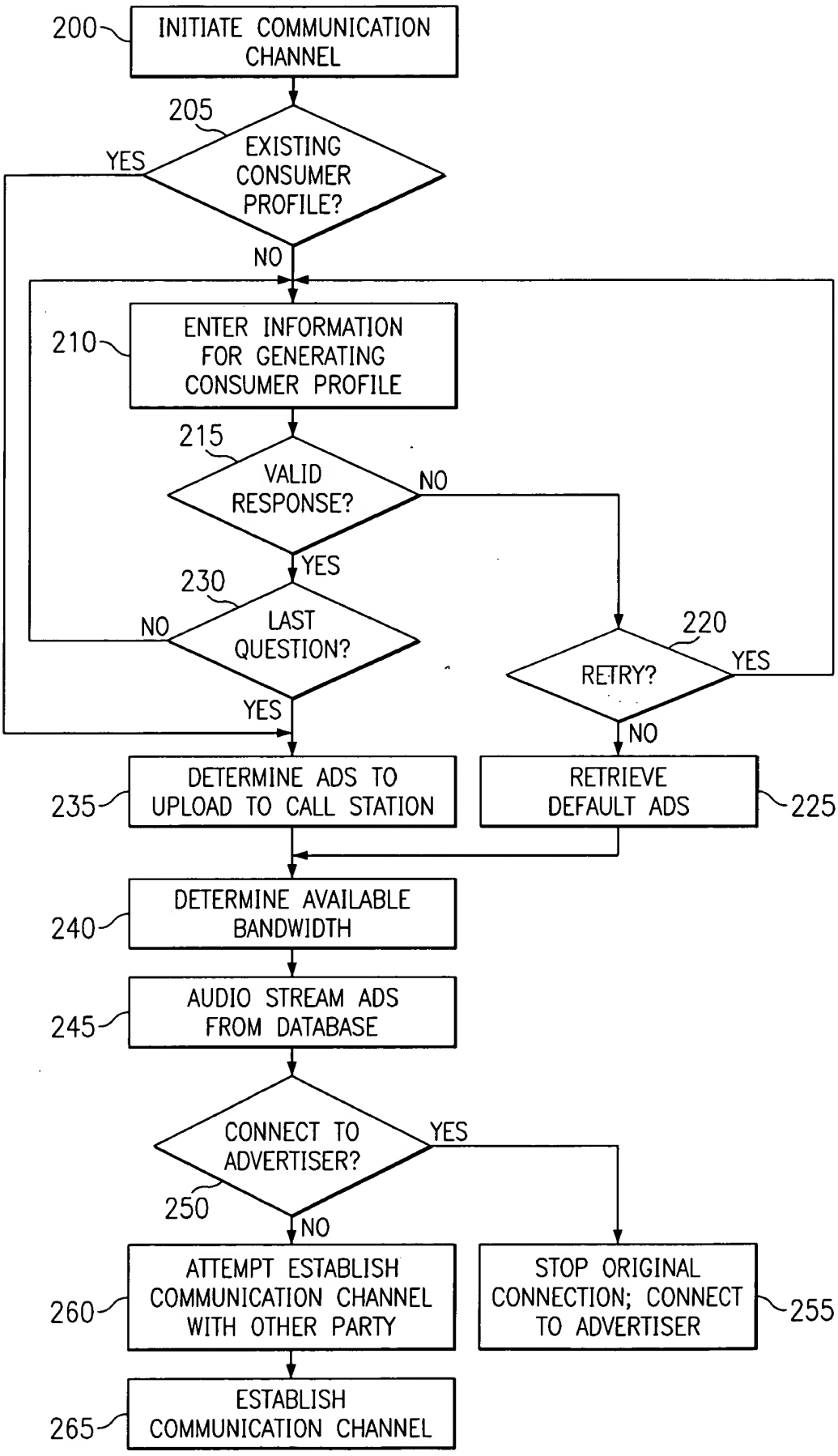

200
INITIATE COMMUNICATION CHANNEL
205
EXISTING CONSUMER PROFILE?
YES
NO
210
ENTER INFORMATION FOR GENERATING CONSUMER PROFILE
215
VALID RESPONSE?
NO
YES
230
LAST QUESTION?
NO
YES
220
RETRY?
YES
NO
235
DETERMINE ADS TO UPLOAD TO CALL STATION
RETRIEVE DEFAULT ADS
225
240
DETERMINE AVAILABLE BANDWIDTH
245
AUDIO STREAM ADS FROM DATABASE
CONNECT TO ADVERTISER?
YES
250
NO
260
ATTEMPT ESTABLISH COMMUNICATION CHANNEL WITH OTHER PARTY
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
255
265
ESTABLISH COMMUNICATION CHANNEL

FIG. 12

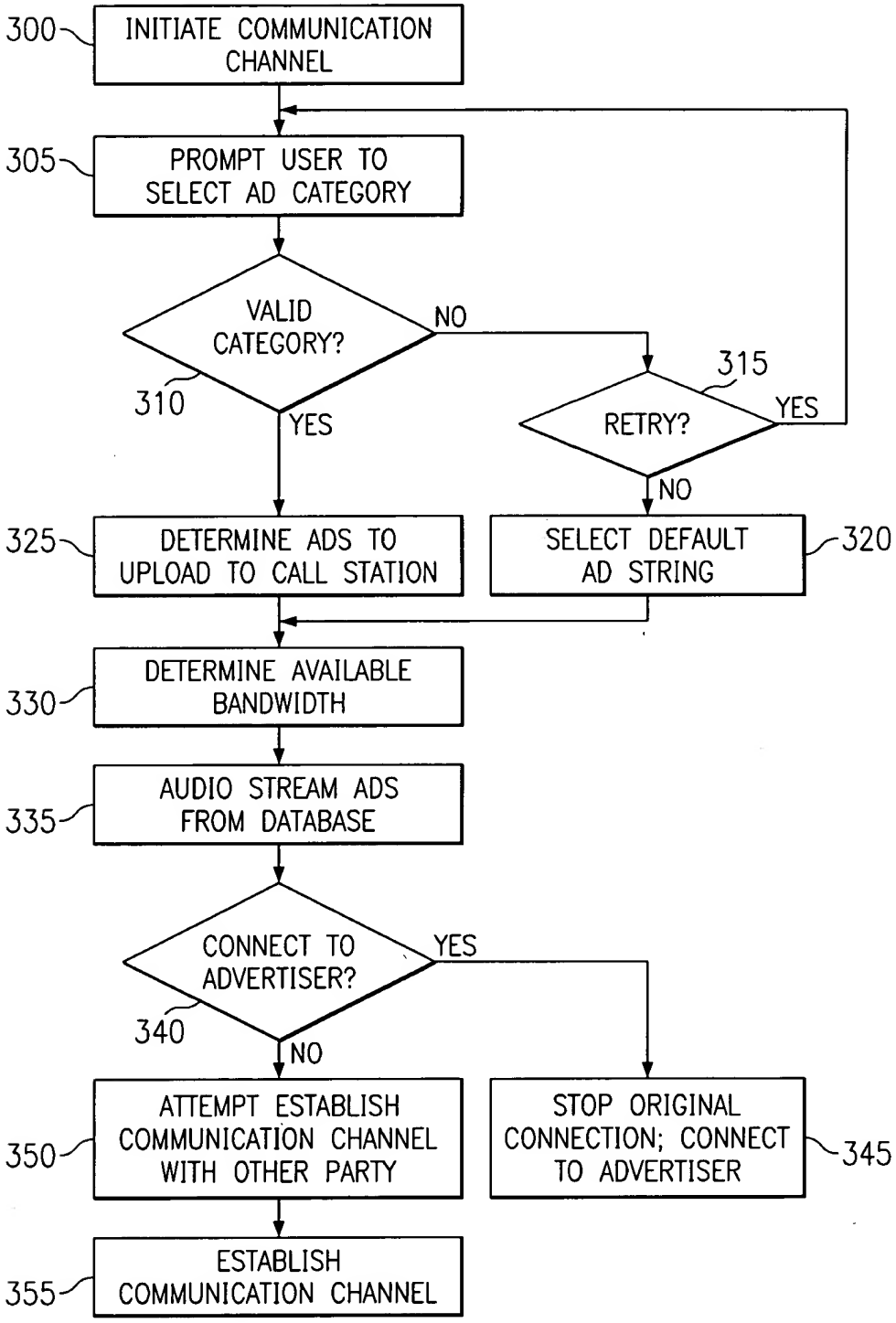

300
INITIATE COMMUNICATION CHANNEL
305
PROMPT USER TO SELECT AD CATEGORY
VALID CATEGORY?
310
NO
YES
315
RETRY?
YES
NO
325
DETERMINE ADS TO UPLOAD TO CALL STATION
SELECT DEFAULT AD STRING
320
330
DETERMINE AVAILABLE BANDWIDTH
335
AUDIO STREAM ADS FROM DATABASE
CONNECT TO ADVERTISER?
340
YES
NO
350
ATTEMPT ESTABLISH COMMUNICATION CHANNEL WITH OTHER PARTY
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
345
355
ESTABLISH COMMUNICATION CHANNEL

FIG. 14

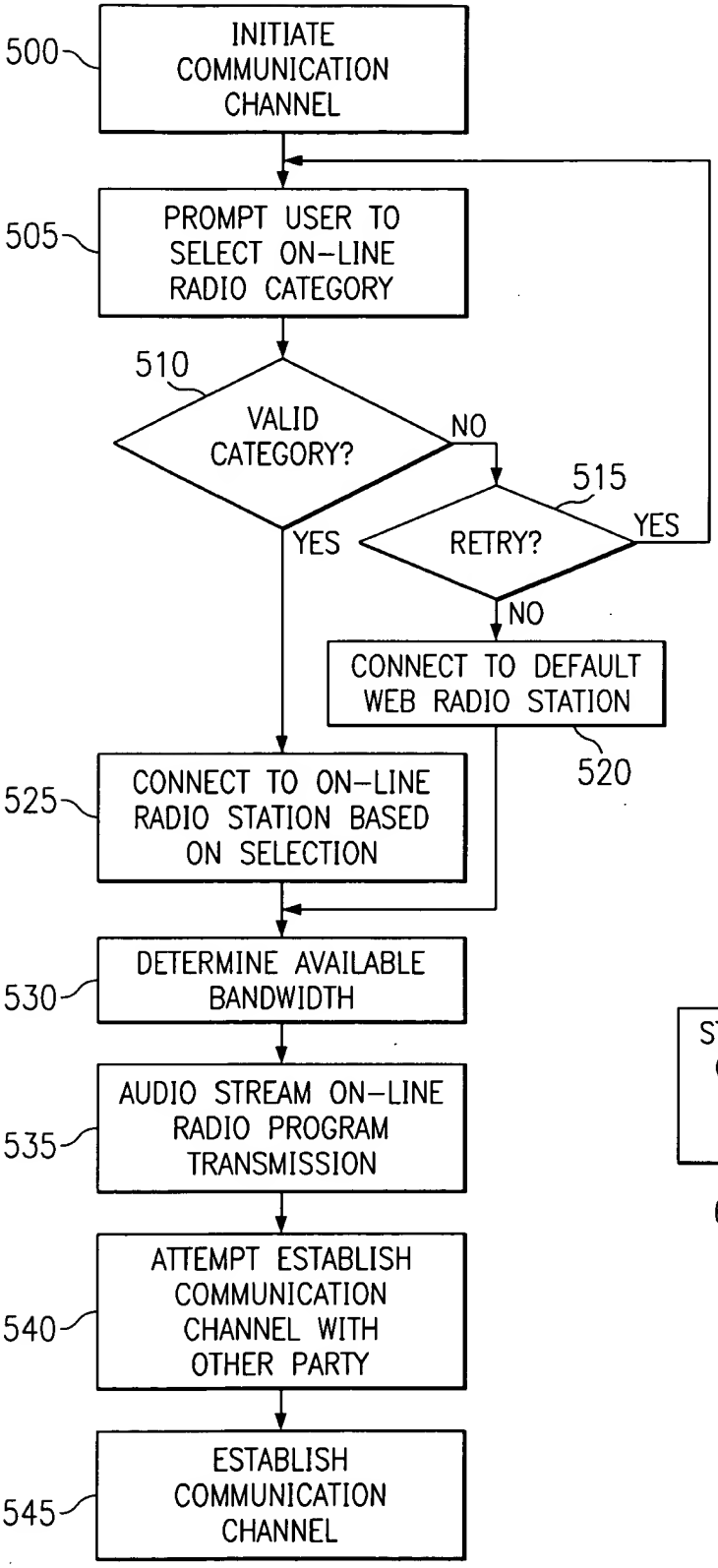
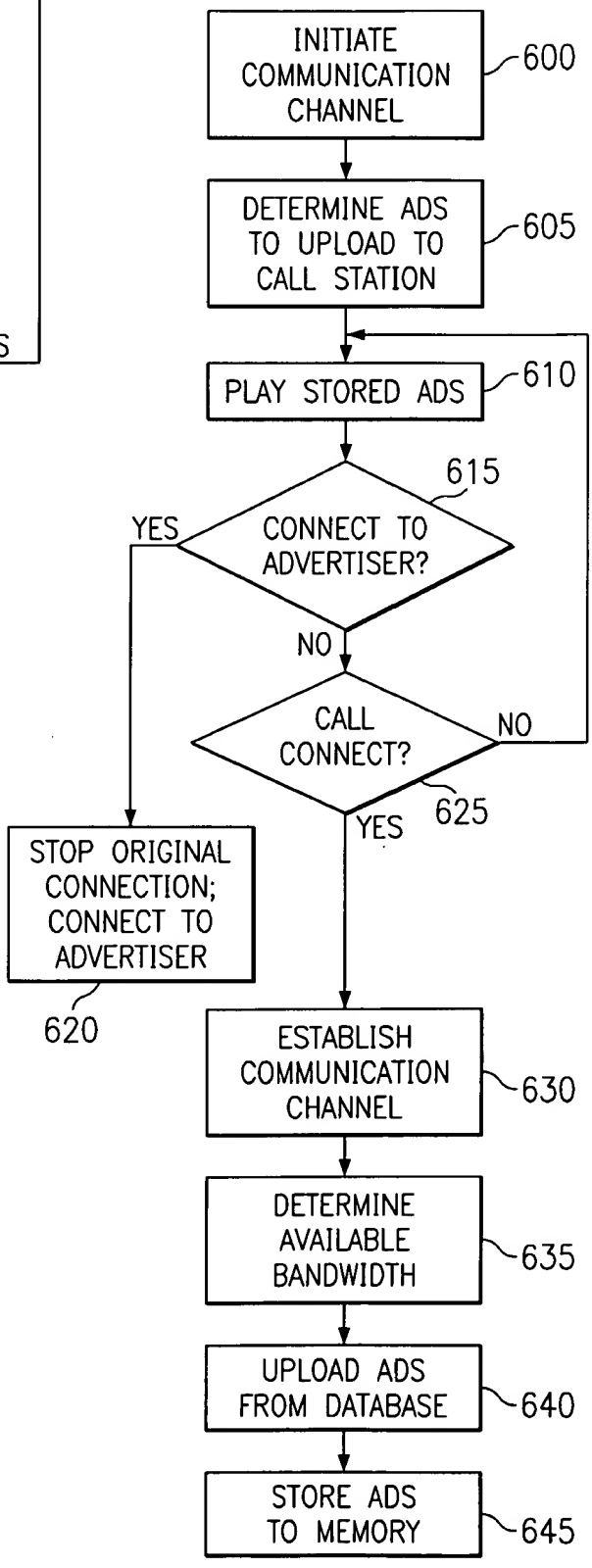

500
INITIATE COMMUNICATION CHANNEL
505
PROMPT USER TO SELECT ON-LINE RADIO CATEGORY
510
VALID CATEGORY?
NO
YES
515
RETRY?
YES
NO
CONNECT TO DEFAULT WEB RADIO STATION
520
525
CONNECT TO ON-LINE RADIO STATION BASED ON SELECTION
530
DETERMINE AVAILABLE BANDWIDTH
535
AUDIO STREAM ON-LINE RADIO PROGRAM TRANSMISSION
540
ATTEMPT ESTABLISH COMMUNICATION CHANNEL WITH OTHER PARTY
545
ESTABLISH COMMUNICATION CHANNEL

FIG. 15


INITIATE COMMUNICATION CHANNEL
600
DETERMINE ADS TO UPLOAD TO CALL STATION
605
PLAY STORED ADS
610
615
CONNECT TO ADVERTISER?
YES
NO
CALL CONNECT?
NO
625
YES
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
620
ESTABLISH COMMUNICATION CHANNEL
630
DETERMINE AVAILABLE BANDWIDTH
635
UPLOAD ADS FROM DATABASE
640
STORE ADS TO MEMORY
645

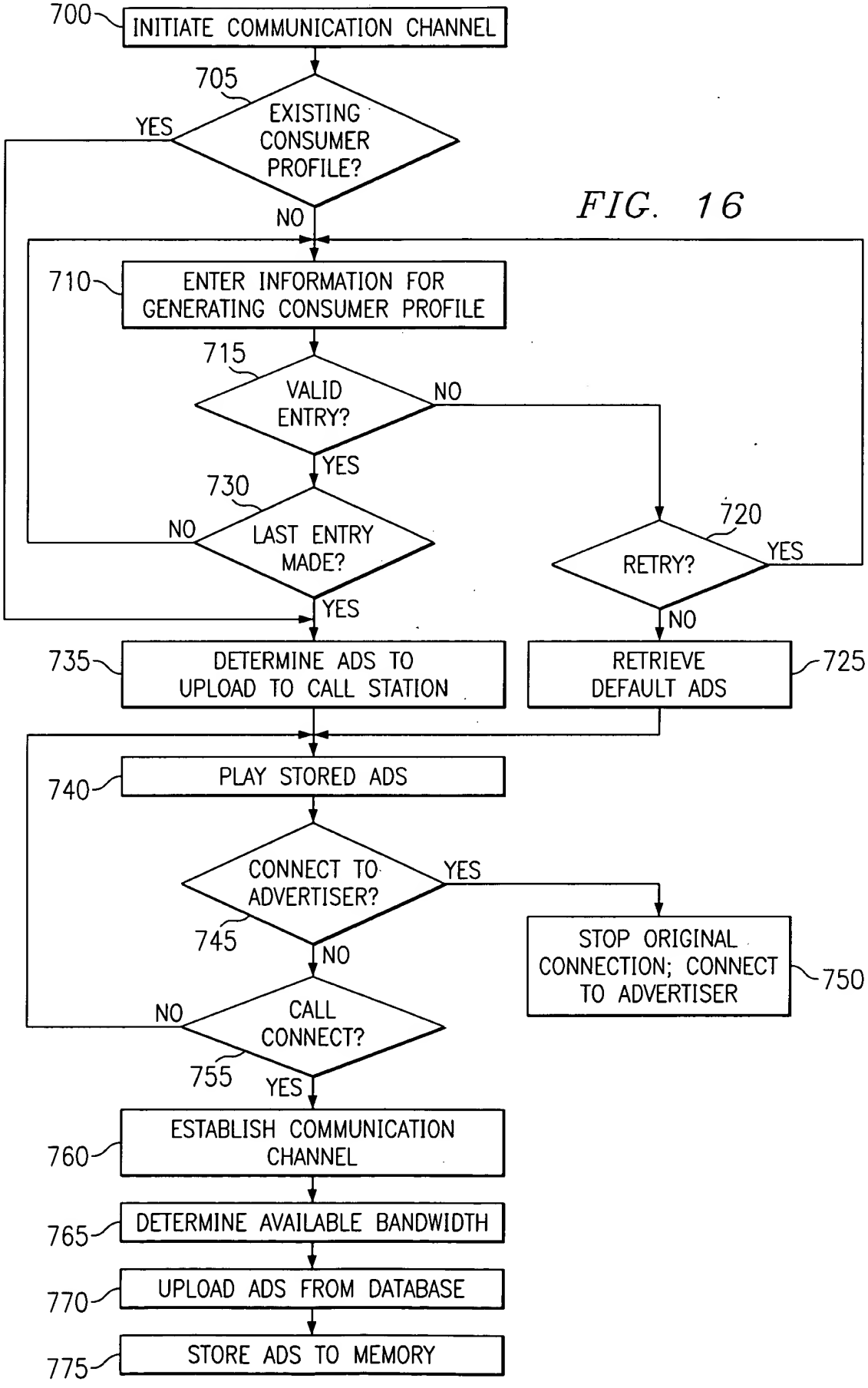

700
INITIATE COMMUNICATION CHANNEL
705
EXISTING CONSUMER PROFILE?
YES
NO
710
ENTER INFORMATION FOR GENERATING CONSUMER PROFILE
715
VALID ENTRY?
NO
YES
730
LAST ENTRY MADE?
NO
YES
720
RETRY?
YES
NO
735
DETERMINE ADS TO UPLOAD TO CALL STATION
RETRIEVE DEFAULT ADS
725
740
PLAY STORED ADS
CONNECT TO ADVERTISER?
YES
745
NO
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
750
CALL CONNECT?
NO
755
YES
760
ESTABLISH COMMUNICATION CHANNEL
765
DETERMINE AVAILABLE BANDWIDTH
770
UPLOAD ADS FROM DATABASE
775
STORE ADS TO MEMORY

FIG. 16

FIG. 17

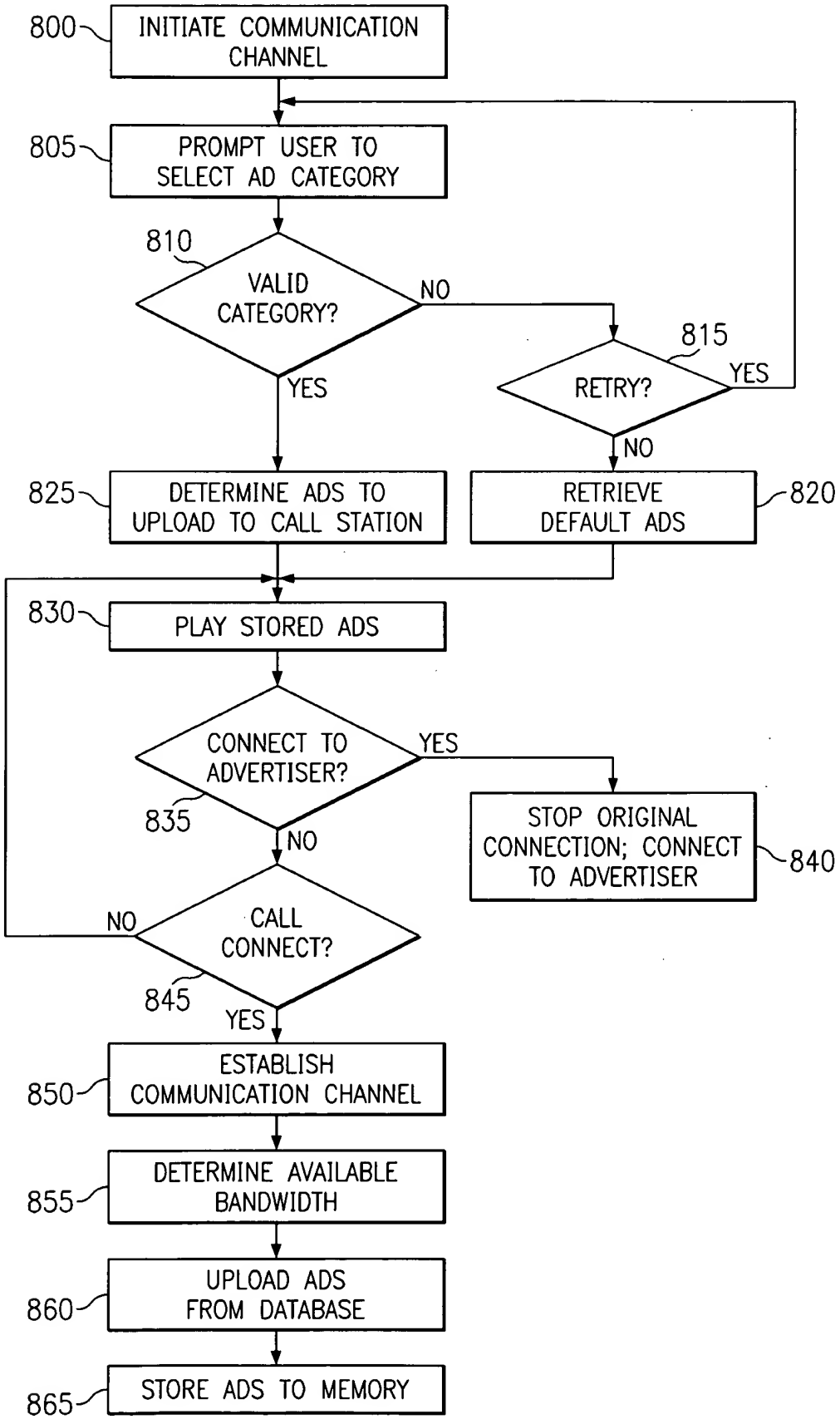
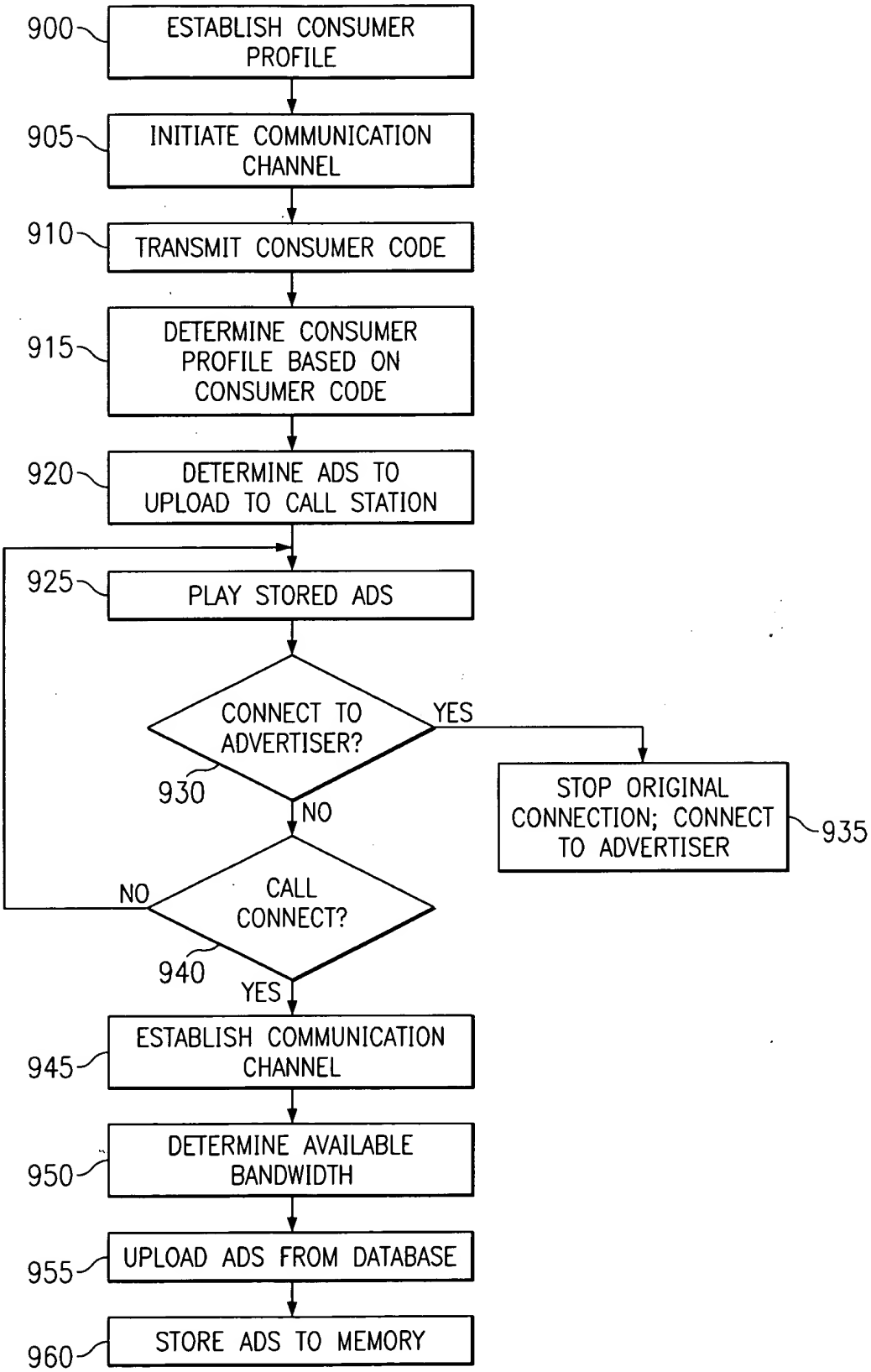

800
INITIATE COMMUNICATION CHANNEL
805
PROMPT USER TO SELECT AD CATEGORY
810
VALID CATEGORY?
NO
YES
815
RETRY?
YES
NO
825
DETERMINE ADS TO UPLOAD TO CALL STATION
RETRIEVE DEFAULT ADS
820
830
PLAY STORED ADS
CONNECT TO ADVERTISER?
YES
835
NO
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
840
NO
CALL CONNECT?
845
YES
850
ESTABLISH COMMUNICATION CHANNEL
855
DETERMINE AVAILABLE BANDWIDTH
860
UPLOAD ADS FROM DATABASE
865
STORE ADS TO MEMORY

FIG. 18


900
ESTABLISH CONSUMER PROFILE
905
INITIATE COMMUNICATION CHANNEL
910
TRANSMIT CONSUMER CODE
915
DETERMINE CONSUMER PROFILE BASED ON CONSUMER CODE
920
DETERMINE ADS TO UPLOAD TO CALL STATION
925
PLAY STORED ADS
CONNECT TO ADVERTISER?
930
YES
NO
STOP ORIGINAL CONNECTION; CONNECT TO ADVERTISER
935
CALL CONNECT?
940
NO
YES
945
ESTABLISH COMMUNICATION CHANNEL
950
DETERMINE AVAILABLE BANDWIDTH
955
UPLOAD ADS FROM DATABASE
960
STORE ADS TO MEMORY